



Issued by : DMC Hamburg

Reference No. : XRD-Hamburg 048

Public. No : 4512 980 58311

Date : December 1999

“GEN” SERVICE NEWS

Optimus RAD / RF - Rotor Control HS service sparepart information.

Since first delivery of Optimus generators the Rotor Control Unit HS has been improved to provide latest possible standard of reliability.

There are three main different units installed.

1. Rotor Control HS Installed Base

PEI	12 nc	initial delivery		Remarks
		start	end	
9890 000 02211	4512 104 33791	1994	03.1994	Replaced via FCO 00 135 008
	4512 104 33792	03.1994	03.1996	
9890 000 02212	4512 104 71401	03.1996	10.1996	PCB Roco HS → 4512 108 08702 PCB Roco Rec. 4512 108 08023
	4512 104 71402	10.1996	03.1997	PCB Roco HS → 4512 108 08702 PCB Roco Rec. → 4512 108 08024
	4512 104 71403	03.1997	03.1998	PCB Roco HS → 4512 108 08702 PCB Roco Rec. → 4512 108 09601
	4512 104 71404	03.1998	07.1998	PCB Roco HS → 4512 108 08703
	4512 104 71405	07.1998	04.1999	NTC kit implemented
9890 000 02213	4512 104 71406	04.1999	07.1999	PCB Roco Rec. → 4512 108 09605
9890 000 02662	4512 104 71421	07.1999		RO Dual Speed Rotor Control PCB Roco HS → 4512 108 09743 PCB Roco Rec. → 4512 108 09605
9890 000 02681	4512 104 71421	07.1999		Dual Speed Rotor Control Optimus PCB Roco HS → 4512 108 09743 PCB Roco Rec. → 4512 108 09605

2. Technical history of the Rotor Control HS Unit

- 4512 104 33791/2
 - First delivery
- 4512 104 71401
 - New design of PCB Roco HS, improved interference suppression.
 - New mechanical unit design due to new PCB.
- 4512 104 71402
 - New PCB Roco Rec. 4512 108 08024, mechanically not compatible.
 - bigger intermediate choke for interference suppression.
- 4512 104 71403
 - New PCB Roco Rec. 4512 108 09601
 - additional SIOVs for overvoltage suppression.
- 4512 104 71404
 - New PCB Roco HS 4512 108 08703
 - solution for error 00M3.
- 4512 104 71405
 - Additional NTC for power on current limitation.
- 4512 104 71406
 - New PCB Roco Rec. 4512 108 09605
 - power on current limitation on board, new diodes.
- 4512 104 71421
 - New PCB Roco HS 4512 108 09743
 - Stator current supervision, new Tube data

3. Service information

Due to the fact of incompatibility of the new Roco HS PCB and the major improvements the following decision for a service strategy was made by XRG Quality committee.

- The installed base of the first version Rotor Control HS (4512 104 33791/2) will be replaced completely via FCO 00 135 008 Action for Performance.
The FCO was released in June 1999 and the replacement action started in all concerned countries.
- For all other installed base Rotor Control units 4512 104 7140x an upgrade via service is defined.
If a PCB or a complete unit will be ordered it has to be done referring the generator serial number.
This is required due to the fact of different kits for Rel. 2.x and Rel. 3.x Optimus generators.

The differences are:

– Kit 1 9890 000 61321 4512 104 91201 for Rel. 2 generators
Kit contains Roco HS unit with Fan (M1) air flow direction upwards

– Kit 2 9890 000 61331 4512 104 91351 for Rel. 3 generators
Kit contains Roco HS unit with Fan (M1) air flow direction downwards
and new "Tube_r3.TDL" on a Floppy disk

- All predecessor Units / PCBs are no longer classified as "EU" or repairable.
Consequences:
 - All parts are to be disposed of locally in a safe way in accordance with local Safety Regulations.
 - No credit will be granted in case parts will be returned to SL Hamburg.

Example:

If the PCB 4512 108 08024; for generator serial number **970216** will be ordered:
Deliverable will be → Kit 1 9890 000 61321

If the PCB 4512 108 08024; for generator serial number **970218** will be ordered:
Deliverable will be → Kit 2 9890 000 61331

If the PCB 4512 108 09604; for generator serial number **996020** will be ordered:
Deliverable will be → Kit 2 9890 000 61331

If the PCB 4512 108 09605; for generator serial number **996025** will be ordered:
Deliverable will be → the PCB itself, 4512 108 09605 because the generator was initial delivered with a new Rotor Control unit HS (4512 104 71421)

If the PCB 4512 108 09605; for generator serial number **970216** will be ordered:
Deliverable will be → the PCB itself, 4512 108 09605 because we assume the generator was upgraded due to an earlier service call with one of the kits.

Note

Be aware of ordering the actual part number of the defective PCB / Unit refering the generator serial number. In this case do not trust the P-list information of Roco Control HS delivered with Service Manual "Optimus RAD/RF".

New Error codes

With the new Roco HS unit new error codes have been implemented.

Error	description	problem source
10SA	overcurrent detected	stator or stator cable
10SC	short circuit detected	stator or stator cable - measure impedance and inductivity of stator coils - replace the tube
10SF	temperature sensor failure	Roco HS PCB heatsink temperature to high